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Please amend claim 1 as follows:

1. (Once amended) A method for automatically managing the communication channel resources between two transceiver nodes having neighboring transceiver nodes in a network of transceiver nodes, wherein each node communicates during specific time slots and uses multiple frequencies on a time multiplex basis, the method comprising:

storing possible communication time slots and frequencies between nodes in the network at each transceiver node; and

assigning each node to at least one of a plurality of cliques, wherein each of the plurality of cliques consists of a plurality of nodes that are positioned to directly communicate with each other, wherein multiple transceiver nodes in a clique utilize the same time slot for transmitting.

Please insert new claims ~~20-29~~ as follows:

20. (New) The method of claim 1, wherein the assigning step for each node comprises:

- (a) identifying one of the nodes;
- (b) identifying a first group of nodes, said first group of nodes comprising any nodes that directly communicate with said one of the nodes;
- (c) for each node in the first group of nodes, identifying a second group of nodes, said second group of nodes comprising any nodes that directly communicate with said each node in the first group of nodes; and
- (d) including within a clique with said one of the nodes
 - a node in said first group of nodes, and
 - a node in said second group of nodes that communicates directly with said one of the nodes node and with said node in said first group of nodes.

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21. (New) The method of claim 20, further comprising:

(e) identifying all possible cliques to which said one of the nodes belongs by repeating steps (b), (c), and (d) until all possible combinations of nodes have been explored.

22. (New) The method of claim 21, further comprising repeating steps (a), (b), (c), (d) and (e) for each node in the network of nodes.

23. (New) The method of claim 1, further comprising choosing time slots for each clique.

24. (New) The method of claim 23, wherein the step of choosing time slots comprises assigning time slots to the cliques according to a hierarchy wherein:

(f) cliques having a node that is a member of only one clique are first assigned time slots.

25. (New) The method of claim 24, wherein:

(g) cliques having at least as many neighboring clique as any neighboring clique are next assigned time slots.

26. (New) The method of claim 25, wherein:

(h) cliques having two or more neighbors that were assigned time slots in steps (f) and (g) are next assigned time slots.